



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/713,800

11/14/2003

Yukiyoshi Sunada

CH2893

4196

23906

7590

04/14/2006

E I DU PONT DE NEMOURS AND COMPANY
LEGAL PATENT RECORDS CENTER
BARLEY MILL PLAZA 25/1128
4417 LANCASTER PIKE
WILMINGTON, DE 19805

EXAMINER

MIGGINS, MICHAEL C

ART UNIT

PAPER NUMBER

1772

DATE MAILED: 04/14/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/713,800	Applicant(s) SUNADA ET AL.	
	Examiner Michael C. Miggins	Art Unit 1772	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 12 October 2005.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-29 is/are pending in the application.
- 4a) Of the above claim(s) 19-29 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-18 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>5/24/04, 11/14/03</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Election/Restrictions

Applicant's arguments with regard to the restriction requirement of 9/19/05 are persuasive and claims 1-18 have been examined together. The restriction requirement of 9/19/05 has been withdrawn. However, the restriction requirement of 5/24/05 is proper and thus claims 19-29 have been withdrawn from examination.

1. Applicant's election without traverse of claims 1-18 in the reply filed on 6/20/05 is acknowledged.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1-2 rejected under 35 U.S.C. 102(b) as being anticipated by Diaz et al. (EP 0 195 292, cited by applicant).

Diaz discloses a conduit having its surface or a portion of its surface coated with a fluid repellent layer wherein said layer comprises, or is produced from, a fluorocarbon silane, wherein said conduit is a nozzle (column 1, lines 28-65) (applies to instant claims 1-2).

Art Unit: 1772

The aqueous emulsion claimed in claim 1 is not a required limitation as written because the claims recites "a fluorocarbon silane or a substantially aqueous emulsion".

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 3-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Diaz et al. (EP 0 195 292, cited by applicant) in view of Iwato et al. (WO 01/90267, cited by applicant).

Diaz fails to disclose an aqueous emulsion, said emulsion comprises or is produced from a fluorocarbon silane or its hydrolyzate, water a surfactant, a silicon compound, a catalyst which is an acid or a base, said fluorocarbon silane has the formula $R_f-(CH_2)_p-Si\{-(O-CH_2CH_2)_n-OR^1\}_3$; said silicon compound is a silicate or an organoalkoxy silane; R_f is a C_{3-18} perfluoroalkyl group or combinations of two or more thereof; each R^1 is independently one or more C_{1-3} alkyl groups; p is 2 to 4; and n is 2 to 10, wherein the surface is metal or ceramic.

Iwato discloses an aqueous emulsion, said emulsion comprises or is produced from a fluorocarbon silane or its hydrolyzate, water a surfactant, a silicon compound, a catalyst which is an acid or a base, said fluorocarbon silane

Art Unit: 1772

has the formula $R_f-(CH_2)_p-Si\{-(O-CH_2CH_2)_n-OR^1\}_3$; said silicon compound is a silicate or an organoalkoxy silane; R_f is a C_{3-18} perfluoroalkyl group or combinations of two or more thereof; each R^1 is independently one or more C_{1-3} alkyl groups; p is 2 to 4; and n is 2 to 10, wherein the surface is metal or ceramic (page 2, lines 22-33, page 3, lines 28-34, page 4, lines 16-33) (applies to instant claims 5-18) as coating for the purpose of providing improved heat resistance and water repellency properties.

Therefore it would have been obvious to one of ordinary skill in the art at the time applicant's invention was made to have provided an aqueous emulsion, said emulsion comprises or is produced from a fluorocarbon silane or its hydrolyzate, water a surfactant, a silicon compound, a catalyst which is an acid or a base, said fluorocarbon silane has the formula $R_f-(CH_2)_p-Si\{-(O-CH_2CH_2)_n-OR^1\}_3$; said silicon compound is a silicate or an organoalkoxy silane; R_f is a C_{3-18} perfluoroalkyl group or combinations of two or more thereof; each R^1 is independently one or more C_{1-3} alkyl groups; p is 2 to 4; and n is 2 to 10, wherein the surface is metal or ceramic in the coating of Diaz in order to provide improved heat resistance and water repellency properties as taught or suggested by Iwato.

With regard to claims 3-4, providing applicant's claimed thickness, absent clear and convincing evidence of an unexpected result, is obvious and well within the level of one of ordinary skill in the art through routine experimentation since it has been found that finding the workable or optimum range or value for a result effective variable is obvious (MPEP 2144). It would have been obvious to one of

Art Unit: 1772

ordinary skill in the art to have provided that claimed thickness in order to provide improved heat resistance and water repellency properties and/or reduce costs.

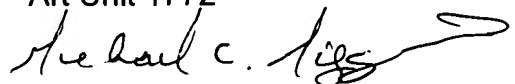
Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael C. Miggins whose telephone number is 571-272-1494. The examiner can normally be reached on 1:00-10:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Harold Y. Pyon can be reached on 571-272-1498. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Michael C. Miggins
Primary Examiner
Art Unit 1772



MCM
December 27, 2005